

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

1 ABSTRACT

2 A shot pellet that, has an inner core of a material such tungsten carbide, that is
3 coated with a layer of bismuth. This coating is molecularly bonded to the tungsten
4 carbide and is not an alloy. The unique properties of the shot pellet allow its density to
5 be tailored. Under this process, the effective density of the pellet can be made to be
6 identical to lead for direct replacement in current lead loading formulations.
7 Additionally, the density can be made to be lower than lead for shotguns requiring low
8 barrel pressures, or higher than lead for enhanced energy transfer while maintaining
9 the other advantages of the instant invention.